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10/520,571	01/07/2005	Jong Cheol Lim	DKC 1775	5945

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10/08/2008

EXAMINER
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SZEKELY, PETER A

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PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* JONG CHEOL LIM and  
SAM JOO YANG

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Appeal 2008-4997  
Application 10/520,571  
Technology Center 1700

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Decided: October 8, 2008

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Before EDWARD C. KIMLIN, CATHERINE Q. TIMM, and  
MICHAEL P. COLAIANNI, *Administrative Patent Judges*.

COLAIANNI, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134 the final rejection of claims 1-6. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b).  
We REVERSE.

INTRODUCTION

Appellants disclose a flame retardant thermoplastic resin comprising a polycarbonate resin, a rubber modified vinyl-grafted copolymer, a vinyl polymer, a phosphorous compound mixture of a cyclic phosphazene

oligomer compound and a phosphate ester morpholide compound as a flame retardant, and a fluorinated polyolefin resin (Spec. 3<sup>1</sup>). Appellants disclose that the mixture of components produces a flame retardant thermoplastic resin having a good balance of physical properties such as impact strength, heat resistance, heat stability, processability and appearance (Spec. 3).

Claim 1 is illustrative:

1. A flame retardant thermoplastic resin composition comprising:

(A) 45 to 95 parts by weight of a thermoplastic polycarbonate resin;

(B) 1 to 50 parts by weight of a vinyl graft copolymer prepared by graft-polymerizing (B-1) 5 to 95 parts by weight of a monomer mixture of (B-1.1) 50 to 95 by weight of at least one of styrene,  $\alpha$ -methylstyrene, halogen- or alkyl-substituted styrene, C<sub>1-8</sub> methacrylic acid alkyl ester, or C<sub>1-8</sub> acrylic acid alkyl ester and (B-1.2) 5 to 50 parts by weight of at least one of acrylonitrile, methacrylonitrile, C<sub>1-8</sub> methacrylic acid alkyl ester, C<sub>1-8</sub> acrylic acid alkyl ester, maleic acid anhydride, or C<sub>1-4</sub> alkyl- or phenyl N-substituted maleimide onto (B-2) 5 to 95 parts by weight of a rubber polymer selected from the group consisting of butadiene rubber, acryl rubber, ethylene-propylene rubber, styrene-butadiene rubber, acrylonitrile-butadiene rubber, isoprene rubber, copolymer of ethylene-propylene-diene (EPDM), polyorganosiloxane-polyalkyl (meth)acrylate rubber complex and a mixture thereof,

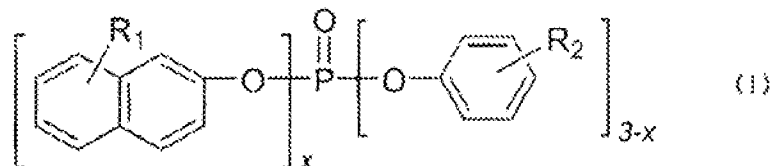
(C) 0 to 50 parts by weight of a vinyl copolymer or a mixture of vinyl copolymer prepared from (C-1) 50 to 95 parts by weight of at least one of styrene,  $\alpha$ -methyl styrene, halogen or alkyl substituted styrene, C<sub>1-8</sub> methacrylic acid alkyl ester or C<sub>1-8</sub> acrylic acid alkyl ester and (C-2) 5 to 50 parts by weight of at least one of the acrylonitrile, methacrylonitrile, C<sub>1-8</sub> methacrylic acid alkyl ester, C<sub>1-8</sub> acrylic acid alkyl ester, maleic acid anhydride, or C<sub>1-4</sub> alkyl or phenyl N-substituted maleimide;

(D) 1 to 30 parts by weight of a mixture of organic phosphorous compounds (D-1) 5 to 95 parts by weight of a monomeric phosphoric acid

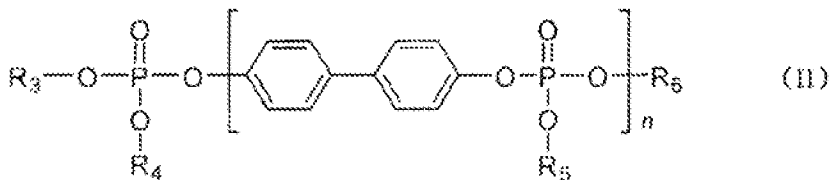
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<sup>1</sup> We refer to the Specification originally filed on January 7, 2005.

ester compound represented by the following Formula (I) or a mixture thereof and (D-2) 95 to 5 parts by weight of an oligomeric phosphoric acid ester compound represented by the following Formula (II) or a mixture thereof, per 100 parts by weight of the sum of (A), (B), and (C):



wherein  $\text{R}_1$  and  $\text{R}_2$  are independently hydrogen or a  $\text{C}_{1-5}$  alkyl group and  $x$  is 0 or an integer from 1 to 3,



wherein  $\text{R}_3$ ,  $\text{R}_4$ ,  $\text{R}_5$ , and  $\text{R}_6$  are independently a  $\text{C}_{6-20}$  aryl group or an alkyl-substituted  $\text{C}_{6-20}$  aryl group, respectively, and  $n$  is an integer representing the number of repeating units from 1 to 5, the average value of  $n$  is the mixture of oligomeric phosphoric acid ester is 1 to 3; and

(E) 0.05 to 5.0 parts by weight of a fluorinated polyolefin resin with average particle size of 0.05 to 1,000  $\mu\text{m}$  and density of 1.2 to 2.3  $\text{g}/\text{cm}^3$ , per 100 parts by weight of (A)+(B)+(C).

The rejection on appeal as presented by the Examiner is as follows:

1. Claims 1-6 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

The Examiner determines that Appellants' deletion of the word "consisting" from the (B-1), and (D) components as originally claimed

broadens the scope of the claims beyond the subject matter supported by the originally filed Specification and thus, constitutes new matter (Ans. 3-4).

Appellants only argue claim 1. As such, we address Appellants' arguments regarding the rejection with respect to claim 1 only.

## OPINION

Appellants argue that the Examiner has not explained why the written description does not support the amended claim (i.e., with “consisting” deleted from the (B-1) and (D) components) (App. Br. 4-5). Appellants contend that “consisting of” as used in the written description has its plain and ordinary meaning (i.e., “made up of”) and does not have the legal meaning applied to the phrase during claim construction (App. Br. 5). Appellants contend that there is nothing in the originally filed Specification that excludes additional monomers from the (B-1) component of the mixture (App. Br. 5). We agree.

The fundamental factual inquiry in determining whether a claimed invention satisfies the written description requirement of 35 U.S.C. § 112, first paragraph, is whether the specification conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, applicant was in possession of the invention as now claimed. *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991). The PTO has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims. *In re Wertheim*, 541 F.2d 257, 263 (CCPA 1976).

When used in a claim, the transitional phrase “consisting of” excludes any element, step, or ingredient not specified in the claim. *In re Gray*, 53 F.2d 520 (CCPA 1931). *See also, Conoco Inc. v. Energy & Environmental Int’l L.C.*, 460 F.3d 1349, 1360 (Fed. Cir. 2006) (“Transitional phrases, such as “comprising,” “consisting of,” and “consisting essentially of,” are terms of art in patent law that “define the *scope of the claim* with respect to what unrecited additional components or steps, if any, are excluded *from the scope of the claim*.” (emphasis added)).

In the present appeal, the Examiner takes the position that “consisting of” has the same legal meaning in the written description portion of the Specification as it does in the claims (Ans. 4). The Examiner contends that “consisting of” as used in Appellants’ original Specification excludes other monomers besides the ones listed in the group described (Ans. 4). We do not agree.

While the phrase “consisting of” has a closed meaning as a “transitional phrase” in patent law parlance, such meaning is applied only to the phrase when it is used within the claims. *See, Gray*, 53 F.2d at 520 (The court applied the closed meaning of “consists” to construe claim 4). The closed patent law meaning of “consisting of” does not apply to the phrase “consisting of” when used in the written description portion of the Specification for two reasons. First, a claim, not the written description, has a “transitional phrase.” Accordingly, any meaning attributed to a claimed transitional phrase does not apply to the phrase when used in the written description portion of Specification. Second, absent a definition provided by an applicant in the written description portion of the Specification, the plain

and ordinary meaning of “consisting of” should be applied to the phrase when present in the written description.

With this distinction in mind, we agree with Appellants that “consisting of” as used in the written description portion of the original Specification, has the plain and ordinary meaning of “made up of” (App. Br. 5). The Examiner does not challenge Appellants’ definition of “consisting of.” As such, we find that Appellants’ originally filed written description indicates that the (B1) monomer mixture is “made up of” the various claimed monomers (e.g., Spec. 3:25-30; 6:25-30) and the (D) mixture of organic phosphorous compounds is made of various phosphorous compounds (e.g., Spec. 4:12-15). Appellants’ originally filed written description portion of the Specification does not indicate that other monomers or organic phosphorus compounds may not be used or that the listed monomers or organic phosphorous compounds are critical.

We further note that the written description indicates that the selection of the various claimed and disclosed monomers of (B1) are merely “preferable” (Spec. 7:12-20). This disclosure indicates that other monomers may be used, albeit they are not preferred. This finding further supports our determination that Appellants’ originally filed written description portion of the Specification demonstrates that they possessed, at the time of filing the patent application, the invention defined by the claims as amended to delete “consisting” from the claim with regard to component (B-1).

With regard to the organic phosphorous compounds (D), the originally filed written description portion of the Specification indicates that organic phosphorous compounds may include (D-1) “monomeric phosphoric acid ester compound according the present invention *is* represented by the

following Formula (I)” (emphasis added) (Spec. 9:20-21) and (D-2) (i.e., “The oligomeric phosphoric acid ester compound according to the present invention *is* represented by the following formula (II).” (emphasis added)) (Spec. 10). Contrary to the Examiner’s finding that the written description only describes (D) as modified by the phrase “consisting of” (Ans. 4), the above cited portion of the Specification does not use “consisting of” to describe the organic phosphorous compounds.

Moreover the portion cited by the Examiner (i.e. Spec. 4-5) that uses “consisting of” to describe component (D) merely indicates that component (D) is “made up of” the components (D-1) and (D-2) as explained above with regard to component (B-1). These findings support that the Appellants, at the time of filing the patent application, had possession of the invention as recited in the amended claims with “consisting” deleted from component (D).

For these reasons, we reverse the Examiner’s rejection of claims 1-6 under 35 U.S.C. § 112, first paragraph, as lacking written description.

#### DECISION

The Examiner’s decision is reversed.

REVERSED

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Appeal 2008-4997  
Application 10/520,571

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